Application No. 10/567,683 Docket No.:0054-0344PUS1 Amendment dated June 30, 2008

Response to Office Action of April 4, 2008

REMARKS

Applicants thank the Examiner for the thorough consideration given the present

application. Claims 1, 3-14 are pending in the present application. Claims 3 - 9 are amended.

Claim 2 is cancelled. Claims 1, 3 and 4 are independent claims. Claims 11-14 are new.

Allowable Subject Matter

During a telephone conversation with Applicants' representative on April 18, 2008, the

Examiner indicated that claims 3-8 are objected to as otherwise allowable claims dependent from

a rejected base claim. Applicants thank the Examiner for noting the allowability of claims 3-8

and have amended claims 3 and 4 into independent format per the Examiner's suggestion.

Accordingly, Applicants respectfully request the allowance of independent claims 3 and 4 and all

claims depending therefrom.

Claim Rejection - 35 U.S.C. §103

Claims 1, 2, 9, and 10 stand rejected as being unpatentable over Japanese Patent

Publication 2003-248057 by Ashida ("Ashida") in view of U.S. Patent 6.085,151 to Farmer

("Farmer"). Insofar as it pertains to the presently pending claims, this rejection is respectfully

traversed

Farmer teaches a collision avoidance system for a vehicle, with one embodiment of the

system using RF scanning for target detection. (Abstract). Specifically, Farmer teaches a

clustering algorithm "to reduce the multiple sensor reports from single large objects ... to reduce

the number of objects tracked and to logically group and track complete objects rather that Birch, Stewart, Kolasch & Birch, LLP DRA/NYM/kcm 11

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portions of objects," (Col. 12, lines 8-13). The stated purpose of this clustering is to allow the

disclosed system "to separately track cars near bridges and other stationary objects." (Col. 12,

lines 22-23).

Claim 1

Independent claim 1 pertains, in part, to a radar system with "a clustering unit for, when

external targets are close to each other, creating a cluster to include the external targets, based on

the smoothed values of the positions of each of the external targets; and an intra-cluster target

tracking filter for performing a correlation process, based on second gates, on the observed

position values and the observed velocity values of the external targets belonging to the cluster

formed by the clustering unit, to calculate, from the observed position values and the observed

velocity values that satisfy the second gates, smoothed values of the positions and velocities of

each of the external targets."

The Examiner asserts that "clustering multiple targets that are close to each other is well

known in radar systems since resolution might not be enough to clearly distinguish between far

close targets," and cites Farmer as exemplary of such clustering (Page 3 of Office Action). The

clustering techniques taught by Farmer, however, deal with the consolidation of multiple signals

from large individual targets and not with the consolidation of multiple distant targets into a

single group because of low resolution. Farmer specifically teaches that "a clustering algorithm

is performed to reduce the multiple sensor reports from single large objects ... and track

complete objects rather than portions of objects." (Col. 12, lines 9-12).

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Farmer does not teach tracking individual cluster signatures after correlation, instead

Farmer computes a cross-range extent for the continuous large object identified by the clustering

algorithm and proceeds to treat it as a single object based on its cross-range extent and centroid.

(Col. 12, lines 24-28). Farmer does not subsequently separately track or measure the individual

positions or velocities of the target signals comprising a large-object cluster.

Applicants respectfully submit that Farmer therefore does not teach or suggest "a

correlation process, based on second gates, on the observed position values and the observed

velocity values of the external targets belonging to the cluster formed by the clustering unit, to

calculate, from the observed position values and the observed velocity values that satisfy the

second gates, smoothed values of the positions and velocities of each of the external targets" as

required by independent claim 1.

Claim 2

Claim 2 is cancelled, rendering its rejection moot.

Claims 9 and 10

Applicants respectfully submit that claims 9 and 10 are allowable at least by virtue of

their dependency from independent claim 1.

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Summary

Applicants respectfully submit that neither Ashida nor Farmer, taken either alone or in

combination (assuming the references may be combined, which Applicants do not admit), teach

or suggest "a correlation process, based on second gates, on the observed position values and the

observed velocity values of the external targets belonging to the cluster formed by the clustering

unit, to calculate, from the observed position values and the observed velocity values that satisfy

the second gates, smoothed values of the positions and velocities of each of the external targets"

as required by independent claim 1 and all claims depending therefrom. Accordingly,

reconsideration and withdrawal of this rejection is respectfully requested.

New Claims

Applicants respectfully submit that new claims 11-14 are allowable for at least the same

reasons as presented for independent claims 1, 3, and 4.

Conclusion

Since the remaining patents cited by the Examiner have not been utilized to reject the

claims, but to merely show the state of the art, no comment need be made with respect thereto.

In view of the above amendment, applicant believes the pending application is in

condition for allowance. Thus, the Examiner is respectfully requested to reconsider the

outstanding rejections and issue a Notice of Allowance in the present application.

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However, should the Examiner believe that any outstanding matters remain in the present

application, the Examiner is requested to contact Applicants' representative, Naphtali Matlis

(Reg. No. 61,592) at the telephone number of the undersigned in order to discuss the application

and expedite prosecution.

Dated: June 30, 2008

Respectfully submitted

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